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Condemnation of Cheap Queens.

Several of our most prominent and successful apiarists have requested us to publish Prof. Cook's able and exhaustive article which recently appeared in the *Rural New Yorker*. We give the article entire, not because it is a reply to Mr. Hutchinson, but for its real worth from a scientific standpoint, and the much good it will accomplish by encouraging a pride in seeking for and breeding the best only. We view it as a virtual indorsement of the position we have taken on the cheap queen traffic, and the response it meets from the great mass of progressive bee-keepers is quite encouraging. The article was entitled "Dollar Queens," and is as follows:

I have been much interested in the discussions in the bee journals as to the policy of rearing and selling "dollar queens;" and no less so in the very candid article from my friend W. Z. Hutchinson, which appeared in a late *Rural*. Mr. H. need have no fear of giving offense. His very evident candor, truthfulness and honesty, must ever win admiration and esteem, and would leave no shadow of an excuse for any hard feeling on the part of an opponent. It is not argument and candor that hurt, it is invective and crimination. I am glad to know that Mr. H. is a gentleman, and so has no use for these latter weapons.

As to the effect of the "dollar queen business," I think that Mr. H. does not understand my position. I believe he has only to understand me to agree with me. I have no doubt, nay, I am sure that he makes the business pay. I am further certain that he does just as he says he will do—that he rears his dollar queens with as much care as he does any, that he

breeds, only from his best queens, and that in all respects his dollar queens are just as good as the tested ones, bating their chance for impure mating—which with the care given to the matter by Mr. H. is slight. Nor am I at all certain that his tested are superior at all to the untested ones. In fact, I think, if I understand Mr. Hutchinson, I agree with him in nearly every point he makes. Yet, I believe that the "dollar queen traffic" had done more than any one thing to retard the progress of American apiculture. I believe it stands directly in the way of the best achievements, and accordingly anything that tends to throttle its existence is a blessing.

The breeding of bees, like the rearing of any other stock, is a matter that must not be hurried if we would secure the best results. Long watching, the most careful study, and the most rigorous weeding out are just as requisite here as in breeding the best short-horns. Does Mr. H. think that our short-horn cattle would possess their present excellence, had there been no greater inducement to hard and persistent effort than that held out to the bee breeder of to-day. It seems to me very patent that the "dollar queen traffic" has so cheapened queens that no person can possibly afford to take the pains that we ought to have taken, unless, forsooth, his bread-and-butter is secured by some other means. I wish we had breeders that could study their bees as did Hammond his sheep, and as hundreds of Hammonds are studying their sheep, cattle and horses all over the country to-day, and could select, mate and breed, not with rings solely in view, but with a far higher ideal in which mere coloration should form but a slight element; then we might look for real progress. I cannot find time with my numerous duties, to do this as I think that it ought to be done. Neither Mr. H. nor any other breeder can afford to do it. They would starve, far short of success; as, however well they might do, they could hope for no adequate remuneration, so powerfully has the late queen business tended to weaken the spirit of improvement. Our present system calls for economy of time, money and thought. But the maximum, not the minimum of care, is what will give us superior bees.

The point I make is just this: The energy and push put into the queen business of late—which energy was absolutely requisite to success, and then only the shrewdest business men could, if honest, make a living by rearing these cheap queens—have so cheapened the price of queens that there is no general demand for any other. But decided improvement can only come by the utmost pains in selecting breeding stock, both drones and queens, which in case of drones is very difficult, and requires the greatest tact, patience, and persistence. Now this very difficulty makes it necessary to have every inducement thrown in the way to incite any bee-keeper to undertake it. The prospect of a dollar or a little more for queens thus bred, would not only offer no such inducement, but would be the best possible extinguisher of all enthusiasm. More than this, to breed the ideal queen, will require such a rigorous weeding out that only a small proportion of the queens reared will be suffered to live. To support a family, the breeder of cheap queens must sell every one, and will then have great reason to rejoice if his ledger account shows a credit balance. In testing, Mr. H. only waits to see if the requisite number of bands are present. I would have him wait to see if the requisite number of eggs, bees and pounds of honey were forthcoming, and then when such assurance was gained, I would pay him \$10 for the queen and make money, while I would lose in the majority of cases to pay \$1 for the present queens. In buying several to test the matter, not however of Mr. H., I have won a blank at each venture.

Why did Avery & Murphy produce such a magnificent herd of cattle? Only because they took the greatest pains to secure the best material to breed from, and then used the best judgment and most consummate skill in crossing. Why did 25 cattle bring \$50,000 at the recent sale at Chicago? For the same reason. Why the exercise of the skill and caution? Only because of the prospective thousands at future sales.

Unless there is some money-influence to induce to more time, caution, and painstaking in breeding bees, then truly the bee of the future, which should and will be as great an advance on the bees of to-day as are our improved cattle, hogs, etc., upon those of the last generation, will not find its advent in this generation. The only chance to escape this conclusion is for some bee-keeper to set to work—as I would do could I give time to it, and had I capital to warrant the undertaking—and work to advance his bees, with no thought of present profit, to spare no time, no pains, no study, no money to secure the ideal bee, and then create his own market by distributing his bees to the enterprising bee-keepers of the country, asking them to test them and then pay according to the worth of the bees. In this way he could hope in time to get pay for his time and labor, and would have the satisfaction of being classed with Bates and the

Booths. Have we any, D. A. Jones, that can afford to undertake this work?

Ag'l College, Lansing, Mich.

History and Composition of Glucose.

The following is an interesting article by Jas. R. Nichols, M. D., editor of the *Boston Journal of Chemistry*, to which we would call particular attention:

It cannot be a mere matter of chance that substances used as food by men and animals are some of them sweet and others acid, or that some are sweetened with sucrose (cane sugar), others with glucose (grape sugar), and still others with levulose (fruit sugar). There is a wonderful adaptation of means to ends throughout nature. The sweet sensation is generally agreeable, as has been before stated, but it must be modified and adjusted, else it would become repulsive. If our fruits were all sweetened with pure cane sugar in differing proportions, they would lack a certain zest, due to a peculiar sweetness which they now possess; or, if our grapes did not form an exception to other fruits in the method of sweetening, they would not be the delicious fruit so universally esteemed. Apples, pears, peaches, and most other fruits are sweetened with levulose, or what may be regarded as a mixture of sucrose and glucose; and differing varieties hold unlike proportions, giving in conjunction with malic acid and certain essences the nice shades of flavor observed. The manufacture of sugar is not set up in fruits until the period of maturity is nearly or quite reached, and then the process is usually a gradual one.

The grape vine and fruit do not possess the power of grouping the atoms of hydrogen, carbon, and oxygen so as to form molecules of sucrose; the result of their work is confined to glucose. Hence a grape is never excessively sweet, or it does not reach a degree of sweetness beyond what glucose can furnish. If a grape were a solid mass of sugar it would not be very sweet, as the sugar is incapable of conveying to the taste any intense sensation. Every one who has tasted old or well-dried raisins has observed the hard lumps of sugar which frequently form, of considerable size, under the skin covering. These are lumps of glucose which result from the evaporation of the moisture in which it was held in solution in the grape. These lumps are deficient in sweetness, as has been observed from the earliest times. If this substance was supplied in large quantities from grapes or raisins, it would sell at a low price in the market. If a grocer sold it for pure sugar (cane sugar), it would probably come back to him again, and he would rightfully be charged with fraud. No shrewd dealer or manufacturer would sell it by itself as sugar, but those dishonest in the trade would mix it with cane sugar, and thus dispose of it

with less risk of exciting suspicion. This is now a form of fraud of enormous magnitude, as will be presently shown.

During the wars of Napoleon I., early in the present century, he established the famous Continental blockade, by which all products of England and her colonies were excluded from the markets. This of course made sugar scarce and dear in France, and stimulated search for products which might be substituted. The grape crop of France was enormous, and as commerce was destroyed it was useless to make wine; so attention was turned to extracting the sweet principle of grapes. Syrups and sugars were made from grape juice in large quantities, and Napoleon ordered it to be used in the palace as an encouragement to its production. He issued several decrees in regard to its manufacture, and the celebrated chemists of the time, Proust, Berthollet, Parmentier, and others, were kept busy striving to perfect the products. Montalivet, the great minister of the interior in Napoleon's cabinet, in one of his reports, states that it has been ascertained that the grape sugar equivalent of cane is a little over two and one half to one. This is not far from correct.

Thus it is shown that the chemists of France were making glucose more than seventy years ago from grapes, and if they had known that it could be made as well from potatoes, corn, or any other cheap substance holding starch, the discovery might have retarded the great progress that soon followed in producing cane sugar from beet juice.

It was as early as 1747 that Margraff made his experiments showing that beets contained sugar, but it was not until Achar, the son of a French refugee in Prussia, took up the subject, and published the astonishing results of his researches, that it excited public attention. The difference between the two forms of sugar, that from grapes and that from beets, was easily seen, and Napoleon's attention was called to it by his corps of illustrious chemists. He immediately gave himself to the work of creating and perfecting this new industry, and in 1812 he had the satisfaction of learning from the reports of his minister of the interior that 334 factories in the empire were producing annually 7,700,000 pounds of beautiful cane sugar from beets. This seems almost like the work of magic, and illustrates the greatness of the man whose power was felt in every part of the civilized world.

The early attempts to extract sugar from beets in Napoleon's time were made subjects for fun and ridicule. The Emperor himself did not escape the lampoons of the wits of the age. A caricature was exhibited in Paris, in which the Emperor and the baby King of Rome were the prominent characters. The Emperor was represented as sitting in the nursery with a cup of coffee before him, into which he was squeezing a beet root. Near him was seated the King of Rome voraciously sucking a beet root, while

the nurse, standing near and steadfastly observing, is made to say to the youthful monarch, "Suck, dear, suck; your father says it is sugar."

In manufacturing glucose from corn, the process is, first, to separate the starch from the other constituents of the grain, by simple mechanical means; and then, secondly, to act upon the starch with dilute sulphuric acid (oil of vitriol). When thick gelatinous starch is boiled for a couple of hours with this acid, a curious transformation takes place; the milky paste first changes to a fluid as limpid as water, and as the change advances this acquires a sweet taste, which is masked by the presence of the acid. If we now saturate the solution with some earthy carbonate, marble dust for instance (carbonate of lime), the acid is removed, and a sweet solution remains, which, after purification, may be evaporated to a syrupy liquid, or by still further manipulation converted into a white solid, which is grape sugar. This is the whole process for making "sugar out of corn," and it is simple enough. In this chemical transformation nothing is absorbed from the air, and no other substances but dextrine and grape sugar are generated, and the weight of the sugar exceeds that of the starch employed. What is still more wonderful, the acid used undergoes neither change nor diminution; it is all withdrawn in its original amount after the boiling is completed. If it could be withdrawn in its clear, uncombined state, one carboy of oil of vitriol would serve to change all the corn grown in the United States into grape sugar. Theoretically, one pound of corn ought to make a pound of solid glucose, but in practice it does not quite do this. The cost of solid glucose to large manufacturers cannot exceed three cents a pound, and it may fall considerably below this.

Nothing can be more paradoxical to the popular reader than the statement that sugar is produced by the use of one of the most powerful mineral acids known to chemists. To explain clearly and fully the chemistry of the reactions involved in the process would require more space than we have at command; and also, to understand the nature of the changes, more scientific knowledge would be required than is possessed by ordinary readers.

Glucose is a cheap, imperfect substitute for the genuine sugar of commerce. It is not a poison when well made, and, as regards its healthfulness, it may not be much more deleterious than ordinary cane sugar. Still, it does produce and aggravate dyspeptic symptoms, and by its proneness to set up fermentative processes its use causes flatulency and painful affections of the bowels.

What becomes of the millions of pounds of glucose manufactured in the Western States every month? It is used mostly as an adulterant in the manufacture of table syrups, and in adulterating the dark, moist sugars used largely by the poor. Its next largest use is in the manufacture of candies. All soft candies, waxes,

taffies, caramels, chocolates, etc., are made of glucose. Children are therefore large consumers of this substance; the honey bees, also, are fond of it, and will carry it away by the ton, if placed within their reach. The honey made from it is no better than the pure glucose, as it is stowed away in the comb without change.

A mixture of true "sugar-house" syrup with glucose syrup, in proportions of five or ten per cent. of the former, to ninety or ninety-five per cent. of the latter, constitutes the high-priced "maple drip" of the grocers. A Western chemist reports the results of recent analyses in which adulterations amounting to from five to fifteen per cent. of glucose were found in various popular brands of sugars.

In this brief consideration of the nature and uses of a comparatively new article of manufacture, the astonishing fact is disclosed that this year more than twelve million bushels of corn have been manipulated to produce an article employed almost exclusively as an adulterant to one of the most common and important constituents of food. It is a reprehensible form of fraud, and should be arrested by laws similar to those which govern the sale of "oleomargarine" compounds. Every package of this sugar should be stamped glucose, and sold as such; and every mixture made with it should be accompanied with a statement, stamped upon the vessels which hold it, giving the exact percentage of glucose contained in the adulterated sugar or syrup. A law similar to that which is found on our statute books regulating the sale of fertilizing compounds would be effective, if energetically enforced. The loss to purchasers in the glucose syrups is enormous as the quantity required to sweeten substances is at least twice as great as when cane sugar is employed, and the use of this quantity of the agent renders it deleterious to health. The attractive appearance of the syrups, which are white and clear, gives them a wide sale at high prices, and all consumers of sweets in the country are victims to a form of fraud which deserves the prompt attention of our law-makers.

Because of its scientific and historic character, the foregoing article will be read with interest, and although Dr. Nichols may disagree with the BEE JOURNAL in some points, still we do not differ as to the effects produced on the human stomach by its constant use. He states most positively that "it does produce and aggravate dyspeptic symptoms," and causes "flatulency and painful affections of the bowels;" that it is "deleterious to health," and that consumers of sweets are "victims to a form of fraud which deserves the prompt attention of our law-makers," and that it "should be arrested by law."

As to the difference between glu-

cose and grape sugar, Dr. Nichols says that glucose is a "syrupy liquid;" by "further manipulation" it may be "converted into a white solid, which is grape sugar;" the only distinction being that one is a "syrupy liquid" and the other a "white solid," both being made from the same material in precisely the same manner. It will be readily seen that the assertion made by Mr. A. I. Root in *Gleanings* for December, 1881, page 619, that "grape sugar and glucose are two distinctly different articles," is but a creation of his fancy, to evade the force of the argument against the use of glucose, when he was defending the use of grape sugar for feeding bees.

Should any of our patrons be suffering from disease and wish to obtain rest and quietude, as well as experience the remedial effects of mineral waters, they may be glad to know that "Jordan's White Sulphur Springs" is one of the most beneficial and pleasantly located of its class, but the attraction to bee-keepers would be the fact that the proprietor, Mr. E. C. Jordan, is an enthusiastic bee-culturist, and has an extensive apiary there, which supplies in abundance the tables of that institution. His new descriptive circular of 24 pages is on our desk, and a copy will be sent free to any one desiring it. Address E. C. Jordan, Stephenson's Depot, Frederick County, Va.

Last week a correspondent addressed a letter to us in this manner "A. B. J. Chicago, Ill." After wandering around, it finally came to us to know if it was intended for the BEE JOURNAL. It caused several days' delay and made much trouble to the postoffice employees—as there are nine postoffices in the city of Chicago. If any one wants to be brief address thus, "BEE JOURNAL, Chicago, Ill.,"—but please don't try to puzzle the postoffice clerks, and risk the safety of a letter by using what may be to them cabalistic signs or meaningless initials.

It is with much gratification we call attention to the resolution adopted by the N. W. Illinois and S. W. Wisconsin Convention, which will be found on page 330. If all Conventions would pursue a similar course, it would do much to strengthen the hands of those who are fighting the adulteration swindlers, and remove the prejudice against extracted honey.

Bees and Honey at Fairs.

Public manipulations with bees and magnificent honey exhibits will soon become the most attractive features of State, County, and District Fairs. There are many good reasons for introducing such, but the chief one, perhaps, is that those who produce honey for the market may be induced to present it in the most marketable shape; for the new methods and new ideas of practical management must take the place of the old and undesirable ones.

It is our aim to make honey a staple product. To this end we have endeavored to popularize the consumption of honey by the masses, as well as to raise the standard of production, by applying correct principles and progressive art to the management of the apiary.

Bees and honey are already the great attraction at such fairs as have given prominence to this industry—and this will become more apparent each successive year. The officers of the St. Joseph, Mo., Exposition were surprised at the result of their experiment in encouraging the apiarian department; they realize the fact that it formed the greatest attraction presented by the Exposition. The editor of the *Gazette* gave his views of the subject in the following article:

Few things last week brought us so many pleasant and profitable things combined—as the display of honey made at the fair, and the lecture of Mr. Newman, of Chicago, on "Bees and Honey." The attention given to the subject this year marks a new era; the display attracted very great attention; good prizes were offered and awarded; the bee-keepers of the region were encouraged, and a more general interest was aroused in the subject. The lecture was very practical, and contained many hints that are invaluable. But practical as it was, the pleasure of the apiary as well as the profit was told; for Mr. Newman is an enthusiast, as, to use his own words, all bee-keepers are.

Mr. Musser, superintendent of the department, wrote as follows:

The exhibits of last year have worked up quite an interest in progressive apiculture in this vicinity. Many then, for the first time, saw the new apiarian improvements, single comb sections, comb foundation, etc., and had never heard of planting anything for their bees to get honey from. Not one cent in premiums was offered last year, but this year over \$120, besides diplomas are offered, and next year I know we can double the amount.

The managers of the St. Joseph

Fair, have, by their foresight, given a good example for others to follow, and we hope the time will speedily come when apiculture, so long neglected by the managers of fairs, will receive its due share of attention. Liberal premiums should be offered for the best exhibits, and these premiums should cover a large variety of special points in order to make the competition the more lively, as well as to enhance apiarian science in general.

The time has now come when arrangements for honey and bee shows must be completed. Vice Presidents of the Continental Society should at once see the Fair Committees throughout the country and have a liberal premium list announced. We suggest something like the following:

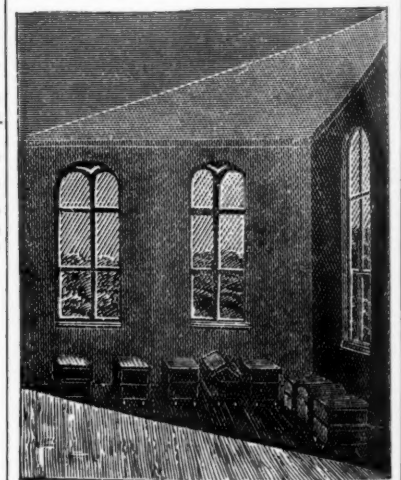
	First Prem.	Second Prem.
Best display of Italian Bees	\$25.00	\$15.00
" " Black or Native Bees.....	20.00	10.00
" " Home-Bred Queens.....	25.00	15.00
" " Imported Queens.....	10.00	5.00
" " Comb Honey, not less than 50 lbs.....	25.00	15.00
" " Extracted Honey, not less than 50 lbs.....	25.00	15.00
Best Colony of Bees in Hive, including manipulation.....	25.00	15.00
Best display of Apiarian Implem'ts.....	25.00	15.00
" " Seeds for Honey Plants, with common and botanical names.....	25.00	15.00
" " Foundation for Brood Chamber.....	15.00	10.00
" " Foundation for Section Surplus Honey.....	15.00	10.00
Best Bee Hive for all purposes.....	15.00	10.00
" " Honey Extractor.....	5.00 diploma	
" " Wax Extractor.....	5.00	
Best display of Honey Pastry, etc.....	5.00	
" " Honey Wines and Beverages.....	5.00	
Best Sections or Boxes.....	5.00	
" " Packages for Extracted Honey, with Labels.....	5.00	
" " Bee Smoker.....		
" " Honey Knife.....		
" " Bee Feeder.....		
" " Blanket or quilt for bees.....		
" " Bee Veil or Face Protector.....		
" " Gloves or Gauntlets for handling bees.....		

Some of the above sums may seem slightly extravagant, to persons who have never seen bees and honey figure to any considerable extent in agricultural and mechanical exhibitions and fairs, but to any reflecting individual, who takes into consideration the magnitude of the bee-keeping interest at the present time, and the illimitable millions of pounds of honey now "wasting its sweetness on the desert air," from want of the proper encouragement and development of the industry, the figures will seem modest indeed. Bee-keeping should rank one of the foremost, if not the foremost, feature at these great gatherings. We respectfully suggest to all who have the management of fairs, that a day be set apart during the season for public manipulations and explanations on this subject, and soon these *industrial days* will become as popular and attractive to the public as are now the "speed days" of

horses, or the "trial days" of reapers and plows.

The following is a convenient method of exhibiting bees at Fairs: One corner of a room on the second floor of a building on the Fair grounds is enclosed by mosquito bar—the hives of bees being inside, with a tube connecting with the entrances running through the sides of the building, allowing the bees free passage in and out of the hives. Manipulation or examination of the bees, may be accomplished by going inside the netting, and no one outside need be disturbed by the bees. This has been practiced with success at several Fairs in this county.

When in Great Britain, during the summer of 1879, we found that the most attractive features of the fairs were the public manipulations with



Corner of Building, inclosed with Netting, for exhibiting Bees.

bees, and the large display of honey of captivating beauty. There they had a large tent, the inner circle being enclosed by mosquito bar or netting around the sides and about 8 feet high, and 6 feet broad; in this inclosure the audience assemble to witness the manipulations with bees.

We gave eight half-hour lectures in this tent; each time the inclosure was full of eager listeners. Two of these were delivered at the Scotch Bee and Honey Show, at Perth, concerning which the *Dundee Advertiser* remarks:

The manipulating tent was a scene of great interest during the show. It is of octagon shape, the operator standing in the middle, while the public feel secure under the protection of an intervening gauze screen. Driving bees from a straw skip and transferring their combs to a bar-frame hive, were hourly operations,

and never failed to strike with astonishment the spectators, who stood aghast at seeing a human being unprotected turning up a hive of bees, and handling them as if they were blue flies. Mr. Thos. G. Newman, editor of the AMERICAN BEE JOURNAL, was present, and gave lectures on American bee-keeping, which were very interesting. The Society presented to him a medal as a souvenir of his visit to this country, and for the valuable services he has rendered to the present session of the Society.

For exhibiting bees, observatory hives were used—those having glass sides, through which the bees may be seen at work—the hives being inside the exhibition building, with a tube covering the entrance, and running through the side of the building, giving free passage, in and out, for the bees. Sometimes, a glass box inclosing each frame, arranged like leaves of a book, with a common entrance to all of them, from the tube running through the side of the building, is made to exhibit bees. This gives an opportunity for thorough examina-

array of honey. The directors appropriated an entire building to the use of bee-keepers, and for the first time at a great exhibition on the American continent, "honey hall" advertised itself side by side with horticultural hall, dairy hall, etc. Honey was displayed in every form, calculated to make the mouths of spectators water. The tin packages and cans were gorgeously colored and labeled; the glass jars were in various beautiful shapes, and even the wooden boxes displayed a wonderful diversity of taste. In the center was a miniature church, ingeniously built of honey comb and wax, with pinnacles and spire. A smashing trade in honey was done at the exhibition. Thousands of people might be seen with gay-looking tin cans dangling from their fingers, or with pretty glass



English Bee Tent.

jars in their hands, or nice boxes under their arms. They bought and carried them home very much as is usually done with toys and trinkets on such occasions. The success of this show awakens great expectations as to the future of bee-keeping in this country.

Of the Honey Show in San Francisco, Cal., the *Semi-Tropic* said:

The attractive display of bees and honey formed a center around which apiarists literally swarmed. One hundred and two varieties of honey-producing flowers, formed a novel and interesting feature of this exhibition. The decorations of white sage were tasteful and appropriate, and the nectar itself, in jars arranged in pyramidal shape, clear as crystal, supported by frame after frame of comb honey, snowy and inviting, made a picture which cannot be photographed except by the artist memory. There were samples of excellent honey vinegar, almost colorless, and above average in acidity; several samples of fruit preserved in honey with undeniable success, and three kinds of honey cake, which elicited the warmest praise from those who were fortunate enough to secure a sample. Fruit cake made with honey is richer and retains moisture much longer than that made of sugar.

A Sample Copy of the Weekly BEE JOURNAL will be sent free to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.



MISCELLANEOUS.

Historic Scrap.—The Baltimore *Sunday Morning* gave a description of the "Sunny Side Apiary" in that city, and adds:

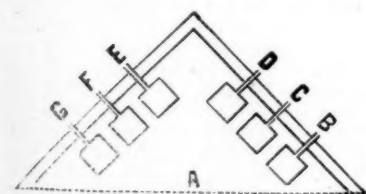
This apiary was, in the days of the late Richard Colvin, the experimental apiary of the firm that then existed, composed of the late Samuel Wagner, founder and former editor of the AMERICAN BEE JOURNAL; L. L. Langstroth, the inventor of the movable frame hive that bears his name, and Richard Colvin, of this city, to whom the bee-keepers of the present day owe their deepest gratitude for bringing out the many useful appliances, introducing new varieties of bees, and various implements connected with bee management of the present day. It was here the first Italian bees were received that ever came from Italy. Mr. Lake still has in his possession the original hive in which they were received, a great curiosity to visitors.

Work During May in Texas.—Dr. J. E. Lay writes to the Texas *Agricultural Journal* as follows:

Our main honey flow for this section of our state takes place during the month of May. It comes from the famous horsemint, a plant belonging to the mint family, the botanical name of which is, if I am not mistaken, *Monarda Punctata*. It begins to bloom generally about the 25th of April, and ends about the 10th of June, continuing in bloom about five or six weeks. It furnishes a clear, amber colored honey of pleasant aromatic taste, very rich and thick, and I presume will be par excellence our market honey for this vicinity.

Now as it is of primary importance to obtain as much of this choice honey as possible, it is absolutely necessary that our bees have all the aid that an intelligent master can give them. We will suppose that during the three months previous all swarming and dividing has been accomplished, all colonies equalized by building up the weak from the strong, or if needed in any case, a quantity of pure white sugar syrup was fed to meet any emergency; and now, that all are ready for business.

You will perceive that the bees seem to have but one thing in view during the continuation of this bloom, and that is to fill every possible space with honey. As a rule, about the 15th of April is the time to put on supers for surplus storing, but this spring my bees were working rapidly in the upper stories of frames as well as in the section boxes by the 1st of April. By close observation the master will know how and when to lay out work for his ever willing



Corner of Building showing Position of the Entrance Tubes to the Hives.

tion of the whole colony. A correspondent in the London *Horticultural Journal*, says:

I can state without fear of contradiction that never in the memory of man has there been such a desire to keep bees as at the present time. People here have been so encouraged in bee-keeping as taught in the bee tents, that I have almost daily applications for instructions concerning bees and hives.

In a private letter, a gentleman in England says:

The American honey introduced into this country in the "prize" boxes, has exercised a compactive influence upon the honey show this year. The season being more propitious than last—the large number of American surplus boxes imported into this country, have gone into use, and the ninety-eight different exhibits, displayed at least a variety never found at an American fair, while the highest prizes in any class, were awarded to the honey in American sections.

Concerning the Toronto Bee and Honey Show, Mr. Wm. F. Clarke says:

Under the stimulus of the liberal prize list, there was a magnificent

servants, and he should avail himself of the earliest opportunity to obtain this beautiful spring crop. We should have no arbitrary rules to govern us, but each bee-keeper should take advantage of an early spring. He should also become acquainted with the honey-bearing flora of his immediate vicinity, and be ever ready to reap to the best advantage. It is well to keep a record of such plants, which will give us valuable aid for future reference. I keep a note each year of the beginning and ending of every bloom from which bees gather a noticeable amount of honey. We must be on the alert this month (May), and see that the queen of each hive has ample room to deposit eggs, that the colony may not become depleted and thus fall an easy prey to the moth. Use the extractor and replace the empty combs, or give them frames of foundation in the brood chamber, having raised the nearly filled frames to the upper story; and if section boxes are used, take them off as soon as sealed and supply them with empty ones containing nice thin foundation very near the full size of the box.

Bee Notes for June.—The *American Agriculturist* for June is received and contains the following as its "Bee Notes for June:"

In all the Northern States, June is the great honey month. The bees are already bringing in this delicious product from the raspberry, the white clover and alsike clover, and before the month ends, the basswood bloom will bring the bees to the great honey harvest of the year. Every bee-keeper should ask and answer for himself: Shall we work our apiaries for comb-honey, or plan to get all, or most of it, as extracted honey? This question was recently asked in a meeting of one of the most wide-awake societies of the country, and all but one answered: work wholly for extracted honey. The unanimous opinion was, that nearly double the weight of honey would be thus obtained, which readily sells at 12½ cents per lb., or more, while the nicest comb honey is only worth 20 cents, the general price being 18 cents. And this is not merely local opinion. Three-fourths of those at the National Convention last autumn, follow this method. The extracted honey is intrinsically as good as the comb honey, and is more nutritious. The wax of comb is neither easily digested nor nutritious. If there is not a present market for extracted honey, one can be readily created.

The honey extractor is coming into general use, and justly so. It is a German invention, is comparatively simple, and not very expensive, and by means of this the honey is thrown from the combs by centrifugal force, when they are returned to the hive to be filled again. If taken from the hive before they are capped over, it saves work and time to the bees. If not removed for extracting before they are capped, the caps are cut off

with a sharp knife run over the comb. There are various machines now made. They should be of metal, run with gearing, be light and strong, and so made that only the basket carrying the combs is revolved, leaving the can or reservoir stationary. They should be large enough to leave space below the basket for at least 100 lbs. of honey.

If we are to work simply for extracted honey, the hive may be very simple, and either one story, or two. I think better results are secured from a one-story hive, though a two-story one looks better. The late Mr. Quinby, who had no superior as a practical apiarist, once offered \$50 for a non-swarming hive. By a faithful use of the extractor, almost any hive becomes a non-swarm— a point in favor of extracting.

When necessary to uncapped some of the cells, uncapping knives, made with a beveled edge, are the best. In extracting during the honey season, it is never advisable to wait for the bees to cap the honey. If the honey is kept in a dry, warm room, and it should be kept in no other, there will be no danger from souring, even if the honey is extracted when quite thin. We have frequently extracted during the honey season as often as every other day, and with no bad results. We would not dare do this, if the honey must be kept in a cool room, especially a damp one. The best place to keep extracted honey is a room that is warmed up to 70 or 80 degrees Fahrenheit, each day, when the sun shines hot. Put the honey in open barrels or cans; cover with cloth that will keep out the dust, but not prevent evaporation. In extracting, care should be taken not to take away so much as to starve the bees the coming winter. The bees can be fed, but that may be neglected, and so honey enough should be reserved. Honey may be extracted from combs with brood, and not throw out the brood; this requires a very even motion. A sharp, sudden jerk will remove most of the bees from the comb; the remainder may be removed by using a bunch of asparagus, a pine twig, or a quill from the wing of a goose or turkey.

If the market makes it more desirable to work for comb honey, sections should be used. Those 4¼ inches square and holding one pound, are the most profitable as they find a ready sale. The sections may be placed in a crate above the brood chamber, or may be suspended in the body of the hive in a wide frame. Sometimes the bees are slow to go into the sections above the hive. In this case it is quite desirable to have the sections so arranged that they may be readily transferred from the body of the hive to the rack above. They are put into the body of the hive until the bees commence to work in them, and then are removed to the rack above where the bees will continue to work. Putting a small piece of uncapped drone-brood into the sections above, will sometimes induce the bees to commence work there. As the brood hatches out, the bees will

fill the cells with honey, and no harm is done.

To secure a good yield of comb honey, the colonies must be strong, and to have them thus, and not be bothered with swarming, requires skill and care. A much more skilful bee-keeper is needed to obtain the best results with comb honey, than to procure the best harvest of extracted honey.

A Standard Frame.—Mr. G. W. Demaree, in the *American Bee-Keeper*, remarks as follows:

While watching the drift and current of the bee literature of the past, I have noticed that the subject of bee hives and "frames" has periodically come up for discussion. There is about the Langstroth frame a history the most remarkable of anything connected with the inventions of the past, so far as they have come under my observation. The Langstroth frame ushered in the great modern system of bee-keeping, and has lived through the stormy period of the past 20 years defying the inventive genius of the American people. Thousands of efforts have been made to supersede it with something better, —with a better frame for all purposes. But not even a large minority of bee-keepers have at any time been induced to accept of anything as being superior to the old "L. frame." I do not say that the Langstroth frame will never be superseded by an improved one. I have much confidence in the inventive genius of the American people. I set no limit to what may be done. The chief objection urged against the Langstroth frame is that it is too shallow and too long to winter bees to the best advantage. There is perhaps some truth in this, but it is an argument similar to that used by Mr. A. I. Root in favor of his "simplicity bee hive," viz: that they stack or pile up so nicely, etc. Well, I have no use for a hive to pile or stack up, neither do I have any use for a frame that is good for nothing but to winter bees on. What we want is a frame that answers all purposes.

Fertile Workers.—The *American Bee-Keeper* gets off the following in its April issue on this subject:

"Fertile workers we believe to be a myth, as we have been keeping bees all our life and have never seen such a thing as a fertile worker."

From the above it would seem that the editor of the *Bee-Keeper* doesn't believe in anything except what he sees. Following out this course of reasoning, as he has never seen his brains, he would be compelled to confess that he has none. This may not be very reasonable, but nevertheless it is logical. Now, we know there is such a thing as a fertile worker, because we have seen more than one of them. Mr. Harrison believes there is no such thing, because he has never seen one. That is the difference.—*Bee-Keepers' Instructor*.

CORRESPONDENCE

Read before the British Bee-Keepers' Ass'n.

A Bee-Keepers' Experience in the East.

T. B. BLOW.

The Cyprian and Syrian races of bees having of late years come prominently into notice, and there being a great difference of opinion as to their merits, I determined to make a visit to these lands and see them in their native state, and so be able to form an accurate and unbiased judgment.

My original intention was to travel via Trieste, Corfu, and Rhodes, take observations, and bring colonies and queens of the various races of bees inhabiting the Eastern shores of the Adriatic. I found, however, that my engagements in England would not permit of such a long absence as this extended tour would require, and, therefore, I determined to go direct to Cyprus and thence on to Syria.

My starting-point was Liverpool, the vessel, on Sunday, 11th December, touching first at Algiers. Owing to my short stay there I was unable to pay any attention to the bees of North Africa. The next port was Malta, and I was interested to find the bees were black. This raised a suspicion in my mind that the bees of South Italy and Sicily were black, and this has been confirmed by Mr. Benton in last month's *British Bee Journal*. He states that black bees do occur in Italy. When we consider that the bees of the Eastern shores of the Adriatic are black, I think that there can be little doubt that the yellow Ligurians of North Italy were originally bees of the extreme East, brought there ages ago by the Romans, and that they have since become a distinct local variety.

Cyprus was reached in about 15 days, and I took up my abode at the English club, there being no hotels in Larnaca. I determined to remain at Larnaca a few days to get a little idea of the sort of people I had to deal with, and to make the necessary arrangements for the journey up into the interior. Happening to mention my business, I was told that an American bee merchant resided in Old Larnaca; and, as I knew this could only be Mr. Frank Benton, I resolved to at once make his acquaintance. I found that he was just about to leave Cyprus, and was, in fact, packing his bees for transit. As I was not going up country for three or four days, I paid him frequent visits, and assisted in packing up his hives. I thus had great opportunities of observing how the bees conducted themselves in their own land in modern hives. Mr. Benton, too, freely gave me much valuable and interesting information, which I shall touch upon later on. Landing in a strange country, it was indeed good fortune to meet with such pleasant people as Mr. and Mrs. Benton, and I have a vivid and grate-

ful recollection of the many kindnesses they showed me.

Not speaking modern Greek, my first search was for a guide and interpreter, and I found they were scarce enough in Cyprus. Some, who were otherwise suitable, did not speak English; others, who did, did not know the country well; and at last I had to fall back upon one, by name Spero, whose character, as given to me in Larnaca, was not the most favorable. To be forewarned is however to be forearmed, and I therefore felt able to contend with him. I found that he had many good points. He never allowed any one, besides himself, to rob or cheat me; he spoke fair English, knew the island well, and all the people therein; was a fair cook (though, in a testimonial he showed me, and which he seemed to value very highly, he was described as an 'indifferent cook'); was able to provide mules, and did not get intoxicated more than once or twice a week. I entered into a contract with him to supply his own services, three mules, one muleteer, and the best food and lodging that the villages could afford for any number of days that I might think fit; and I must say that he carried it out well.

A start was made on Monday morning, January 2. In the mule bags were placed 48 small hives which I had brought out with me. As I desired to get the bees from the hills rather than from the plains, where tropical heat prevails in the summer, we struck in the direction of the mountain called Stavro Vuni, or mountain of the holy cross. Inquiries were made at the various villages through which we passed, but the people were not willing to sell their bees; and Spero assured me that in some cases I was mistaken for an official, and they feared that some taxation of the bees was intended, and therefore they declined to have any dealings. The fact that all the people live in villages only, of course, made it very convenient, for we had not to run from house to house a mile or two apart, as would have had to be done in a country where the people dwell in scattered habitations.

The first village where bees seemed to be in great quantities was Hagia Anna, but the people would not sell at any price. We passed the village mill in leaving, and the miller hearing what was required informed us that a man who owned 100 colonies was deeply in his debt, and he would see whether he was willing to sell. However, we found that the man had gone to Larnaca, and nothing of course could be done. The miller very much pressed me to wait, evidently seeing a fair chance of getting his debt. We proceeded, however, and, passing through many villages with but few bees, we arrived in the evening at Lithrodonda, a large village wherein were many hives. There was no inn in the village, but as Spero knew the parish priest, we put up there, and were very courteously received, the best room being set apart for my use. We adjourned to the cafe, and told the assembled gossips our business,

and two or three persons set off to call the bee-keepers of the place. They evidently were not anxious to sell, and this seemed to be the case everywhere, and Spero explained it in this way. For two years the people had had good crops of corn, wine and oil, and were well off and out of debt, and therefore did not much need money. One, however, had 6 to sell, and after long haggling we got to within about 1s. per lot of each other, but as I declined to advance, and he was unwilling to retreat, the bargain was not struck.

We returned to our quarters at the priest's, and it was soon evident that he and Spero were old cronies together. They soon waxed merry over their wine and mastic, and the priest, being told of our difficulty in bargaining, announced his intention of going to see the people, who were his relations, and to try and complete the sale. He soon returned, and told me that the bees were mine. This being satisfactory I retired. The furniture of my room consisted of a kind of shutter against the wall at one end, and supported on two legs at the other. This, with a somewhat thin collection of clothes, formed the bed. Great care was necessary, or the whole affair would have come to grief. Washing appliances did not seem to be considered necessary, and the people evidently were not fond of the application of water. A beeswax taper stuck against the wall, and the list of furniture is complete. To levy a distress on the furniture of a village home in Cyprus would be somewhat of a farce.

I rose early to get the bees, but found the man had been persuaded by his wife to run back from his bargain, and though the priest came down and tried to persuade them, and Spero fetched two zaptiehs, or policemen, they would not let us have them. However, we heard that a man had been to the village mill that morning, and, hearing that we wanted bees, had offered to sell. His place was more than one hour distant, but I determined to go. Here, again, the man's wife was the impediment. She, hearing that we wanted the bees, positively declined to allow her husband to come out of the house to see us. She stood in the doorway and kept guard over him, and inside he had to remain, and we to go back to Lithrodonda without bees. She—sensible woman—said that if her husband got the money for the bees he would spend it in wine, and next year she should have no honey. Arriving back in Lithrodonda, we found that our old friends there had repented that they had not sold the bees, and I therefore got the 6 lots.

There not seeming much chance of getting more bees near, I decided to go back to Hagia Anna, and see whether the debtor of the miller had returned. He had, but during his visit to Larnaca he had got some money and paid the miller, so no bees were to be had. He, however, kindly offered to sell his bees at 100 piastres (over 10s.) a lot, not to pick them, but take them from the stack. I should

remark that the bees are kept in clay cylinders, about 3 feet long and in diameter 15 inches at one end tapering to 10 at the other. These clay pipes are stacked in large piles, sometimes as many as 50 to 100 in one stack.

The accommodation at Hagia Anna was wretched. I had a mattress spread on the stone floor, and my saddle-cloth.

Next morning began the third day, and only about 6 lots of bees collected. I began rather to suspect that Spero was not trying his best to get me bees, but prolonging the journey a bit, that of course being to his advantage. I intimated as much, and Spero assured me that at a village about 15 hours off there were only 7 houses and 500 lots of bees. This looked promising, and as there were many villages on the route I decided to go. The village was hard by the monastery of St. Chrysostomos, and, I believe, nearly 2,000 feet above sea-level. We journeyed all day, and at evening stayed at a village at the foot of the mountain range running along the north of Cyprus. Here we stayed with the parish priest, who was a bee-keeper. He said that he had 300 colonies last year, but a hot wind came and melted the combs and destroyed the bees. His present stock was 3 lots only. He was very kind, and offered, had it not been so near Christmas, to have procured bees. I did not care to have them from such a warm place however.

In the morning we proceeded towards Kutzo Venti, but the progress was both slow and dangerous, owing to the heavy rain that had fallen in the night. The path up the mountains ran along the tops of deep ravines, and in many places had been washed almost away, and rendered very unsafe. About noon we arrived at this wonderful apiary of 500 colonies. Truly, there were 7 houses, and perhaps 50 lots of bees. The people would not sell at first, but consented, just as we were starting off, to let me have 7 lots; but on these conditions,—the cylinders were not to be moved out of the stack, neither were both ends to be opened. Being anxious to get bees I accepted these terms, but before I had got the first lot out I found that I had made a bad bargain. The seven lots I purchased were distributed about a stack of about 40 to 50 cylinders, and, as it was a warm day, the bees were flying strongly. In removing the ends of the cylinder I had to jar the pile considerably, and the consequence was that I had the bees of the whole 50 hives around me, and did not they sting? At first their owner and Spero had offered to assist, but not many minutes had elapsed before they fled howling in all directions, and I was left alone to fight the battle. I saw I should get worsted, and retired to the house, where I found the others extracting the many stings.

I offered the man a sum to let me off the bargain, which he did, and I retired from Kutzo Venti somewhat crestfallen. I upbraided Spero for deceiving me, and announced that I would go to Kythrea. He assured

me that no bees were kept there, but I insisted on going. This was the fourth day—result, about 8 lots of bees, Spero said that we could do no business during the next two days, it being the Greek Christmas. I suggested that we should return to Larnaca in that case. He at once changed and said he would do his best if I would not return.

After a few hours' riding we reached Kythrea, and a more lovely valley I had rarely seen. Streams of spring water ran down each side turning innumerable mills. The orange and lemon groves were almost continuous; every moist wall was a carpet of maidenhair fern, and crocuses and anemones in places almost carpeted the ground. Bees, too, were everywhere, and I believe that the valley, though only about 2 or 3 miles in length, contained more than 1,000 colonies. In many cases the cylinders were built into the walls of the houses and the bees' entrances were in the streets, and these streets narrow ones too; I never, however, heard of the people getting stung. The roofs, too, were covered with hives. The people here seemed a more business-like race, and before night about 13 lots had been purchased. The news that bees were wanted quickly spread, and, though it was Christmas day, the people after they had been to church were not at all averse to business. The priest too, was a most amiable man, and did all in his power to get me the bees, and with the result that before noon more than 40 lots were mine.

The next difficulty was transit. Most of the hives were grand stocks, and I did not like to transfer them into my little boxes. I therefore determined to convey them to Larnaca on mules in the cylinders and there transfer into larger hives. The mule and donkey owners of the village were called and demanded double rates owing to Christmas time; but after a lot of bargaining they consented to take a fare and a half, and I hired in all about 27 animals. Packing up 40 cylinders to be ready the next morning at 7 was no light task. I worked like a slave, and it was far into the night when my labors were completed. Each mule had two cylinders to carry, and, as each was loaded, the former owners of the bees fumigated both bees and ourselves by burning sweet-smelling leaves on little charcoal dishes to ensure that both ourselves and bees should prosper. It was a long day's journey from Kythrea to Larnaca (over 30 miles). The valley contains a succession of villages with very narrow streets, and the cylinders had many narrow escapes from being broken against the corners of the walls. The journey across the Messoria, or great plain, was diversified by a mule occasionally falling down or lying down to roll, or jumping across some little stream to the great danger of the hives. The end of one came out and so did the bees; but the muleteer had presence of mind enough to cover the opening at once with his coat.

Larnaca was reached between 8 and 9 at night, and bees were found safe.

I had previously hired a house, which had a very large courtyard and verandah, formerly occupied by the Russian Consul; and here I transferred the bees and combs into bar-hives made by a native carpenter of much larger size than those I brought out. This, of course, was the work of some days, and when completed I proceeded on to Beyroot to get Syrian bees. On landing, my bees were at once seized by the customs authorities and declared contraband. For two days they kept them, and it was only when I had obtained the assistance of the English Consul and some other friends that they gave them up, and even then I had to pay 10 per cent. duty on them. This delay was fatal to getting bees at Beyroot, where my friends, Joseph Abdelnour Faker and Dr. Beshara I. Manasseh had kindly made inquiries (in the neighborhood and on Lebanon) among the native bee-keepers, and where I should have readily obtained any number of colonies, but, as the steamer that I was to return by came in on the third day, I had to go on board. Tripoli was the next port, and though I saw some bees, I could not deal.

At Scanderoun I had no trouble at all. Mr. Christian, of the Ottoman Bank at Beyroot, had furnished me with a letter of introduction to the agent at Scanderoun, and he very kindly sent me to a bee-keeper close by. The bees at Scanderoun are kept in wooden boxes about four feet long and nine inches square. The colonies were very strong, and I determined to take them home in the original cases. I decided to drive the bees to one end of the box and saw it in half. Getting a saw of the ship's carpenter, I returned and commenced work. This proceeding attracted many, curious to know what was going to be done. Seeing one hive cut in half was enough. The sawing, of course, greatly irritated the bees, and the crowd retired, many of them having their curiosity more than satisfied.

I was stopped at the Custom House, but my offer to open one of the cases to allow them to judge of the contents was politely declined, and I went on board. Whilst lying at anchor off Scanderoun, I gave my bees a flight on board, and no one got stung. This I did also at Alexandria, where we were delayed 16 days. The commander of the *Ararat*, Captain Sandrey, took much interest in the bees, and all along showed me the greatest kindness, giving me the offer of any part of the vessel in which to put the bees on the homeward voyage. I tried below deck first, and there unfortunately got a number stifled, owing to the rough weather causing the hatches to be battened down, and at same time I was much too ill *mal de mer* to go to their rescue. A call was made at Valencia, where another delay occurred through quarantine. I went into the country to observe the Spanish bees, but, with the exception that they appeared very black, they differed little from our English bees. After leaving Valencia, the sheep-pen on deck was used to shelter the hives in, and in this they safely ar-

rived at Liverpool after a voyage of over 6 weeks, about 20 per cent., I believe, being lost on the voyage.

As I before remarked, the bees are kept in cylinders in Cyprus, in Syria in long boxes, also in water-jugs and baskets plastered with mud. The bee-keepers of the East are far more advanced than the old-fashioned English straw skeppists, for they never kill their bees. The lid at the large end of the cylinder is removed, the bees smoked to the other end, and about half the combs in the cylinder are cut away, the other half being left for the bees.

The cylinders are placed in huge piles, and the bees enter at small holes in the front, the entrances not being a foot apart. I think a point in favor of bee houses can be brought forward, or, rather, one of their supposed disadvantages rebutted. I bought between 50 and 60 lots, and in no case was a colony queenless. The great disadvantage of a bee house is supposed to arise from the queen mistaking the entrance. If the Eastern queens can find their entrances thus readily in a pile of fifty to a hundred hives, they must either have better discernment (a point in their favor) than English queens, or this objection to bee houses is unfounded. Such grand colonies of bees as those I got both in Cyprus and Syria I have rarely seen, and these, too, never having had attention in the way of feeding, but left just in a natural state. Though it was winter, almost all contained fine patches of brood.

The queens are very prolific, and the brood is raised in compact, solid masses, no patches of comb being left empty.

The bees are undoubtedly better workers, being much more active and stronger on the wing than our bees, though just a trifle smaller.

The small amount of drone-comb they build is another great point in their favor. (I believe that I can say that I have seen more drone-comb in 2 or 3 English hives than in the whole 50 or 60 I transferred). Their gnawing propensity, too, I imagine will be of value. The development of the jaws of the Eastern bees is curious, and has doubtless been brought about by the grape crops of the East. A bee-keeper at Scanderoon told me that great damage is done to the grapes by the bees, and that they get great quantities of honey or rather grape-juice from this source.

The great point against them is their irritability, and it is certainly a great drawback, and may prevent them from coming into general use. This irritability is far greater in the Syrians than in the Cyprians. An experienced bee-keeper would, of course, have no difficulty when once he knows the precautions it is necessary to take. If the quilts are removed very slowly, so that a great flood of light does not rush into the hive at once, the bars moved gently without jarring, and the bees not breathed upon, then all will be well—they will require no smoke and will be quite harmless; but a careless manipulator, not attending to these precautions, would

probably irritate them, and their temper once roused is not easily soothed. Mr. Benton went through hive after hive in my presence without gloves or veil, and assured me that he did the same thing during the summer and did not get stung. I believe the evil reports have arisen through a lack of knowledge on the part of the owners of these bees, or on account of not getting the genuine article. When these bees are angry they appear to be cautious in stinging, but attempt to bite in preference.

Braula cæca is very abundant on the Eastern bees, but especially so on the Cyprians. Though I had but little experience with the bees of Palestine, I noticed a marked difference between this race and the Cyprians and Syrians. The Palestine bees are much more slender and downy, and deserve to be ranked as a distinct variety. The Cyprians and Syrians are, in my opinion, almost identical. They vary a little in color, the bees from the north of Cyprus being very dark.

Welwyn Herts, England.

For the American Bee Journal.

Lime Packing for Winter.

J. C. OLDHAM.

Our Southern friends have quite the advantage of us, in that they need not bother much about the wintering of their bees; not so with us here in the North. I read the Weekly BEE JOURNAL with much edification, and am greatly interested in what all contributors have to say about wintering bees—what absorbents are used; but never liked the idea of using chaff, straw, dry leaves, sawdust, etc., that were and are still so much advocated. Such absorbents retain all moisture, and therefore are as a wet blanket which is worse than none at all.

I use or have used only a quilt or carpet over my bees, until I first saw the lime project suggested, about Jan. 1, 1881, by some Kentucky gentleman, I believe. I had in the fall of 1880, 10 colonies in Langstroth hives in very good condition, but not as well prepared for winter as I desired—that is, more frames in the hives than were necessary. The cold weather set in so early and did not warm up again until spring. I liked the lime idea so well I thought I would experiment a little, and so put lime, partially slacked, in three hives; one I overheated and killed the bees, the other two came through in splendid condition.

I lost 5 of the 10 colonies I had in the fall; from those 5 during the summer of 1881, I took 400 lbs. of honey, mostly extracted, and increased to 12, the number I now have, except on the 8th inst., I had a swarm, making more than I really want or have time to attend, as I only keep bees for pleasure and recreation. Last winter I put lime in all my 12 colonies. They came through splendidly. No doubt they would at any rate, but I occasionally looked in the hives, and the combs were always nice and dry with not the

least sign of frost. Lime is the least trouble of all absorbents to put in and take out again, much more convenient than the so-called absorbents.

Springfield, O.

For the American Bee Journal.

An Open Letter to Mr. Doolittle.

DR. L. JAMES.

DEAR SIR:—I have read with much satisfaction your late articles in the BEE JOURNAL, giving your plan of securing such favorable results from your bees and the large yield of comb honey as reported in them. In addition to the information communicated in those articles, I should like to have one more, connected with them, that no doubt will interest many others as well as myself, and it is this: How do you manage to have so many hives open on each favorable day, so early in the season, interchanging the combs in the hives, and carrying others of brood around among your hives, to strengthen feeble colonies, without having a cloud of intruders from the other hives, ready to pitch into a hive as soon as it is opened, and thereby endangering its destruction, if it is a weak one?

I presume it is nothing uncommon with you, on opening a hive, to find it necessary to trim off some honey from certain combs to have them fit the place of those with which they are to be exchanged. And as the honey resources at this time are rather scant, the bees are upon the alert and will follow around, waiting to begin depredations on their neighbors as soon as the frames of comb are exposed.

I find my bees are so easily trained in this direction as to give me much trouble after a few hives have been attended to. If the hive is not too heavy, by carrying it into the bee house and attending to it there, this annoyance and risk can be avoided, but, as a general thing, my hives are too heavy for me to do so.

At your earliest convenience if you will give us your method by which you avoid this trouble you will much oblige many readers of the BEE JOURNAL.

Atlanta, Ill.

For the American Bee Journal.

The Standard Langstroth Hive.

G. M. ALVES.

Beginners frequently spend a good deal of their time in study as to the kind of hive they should use. As this is a matter of considerable importance, and one in which one's crude fancies often run into error, I propose here, for the sake of these beginners, to give what seems to me good and sufficient reasons why the standard Langstroth hive should be adopted. I wish to state here that I am not interested in the manufacture or sale of hives.

1. The Langstroth hive was the invention of a man who brought to his

task great interest, great experience, and a mind probably better fitted for his peculiar work than any of his successors. Hence, in using his hive, we trust to authority than which there is none better.

2. The Langstroth hive has steadily grown in popularity, and to-day is much more used than any other hive. We thus have the sanction of time and experience, which are of the greatest value in testing the usefulness of any invention.

3. The Langstroth hive and furniture being standard articles, may be more easily procured than any other. There are few supply dealers that do not keep in stock these hives.

4. The Langstroth hive and furniture being standard articles, may be procured at a less cost than any other.

5. Bees in Langstroth hives can be more readily sold, and at better prices, than if in odd frames.

Thus there are 5 good reasons that cover the whole ground why beginners would do best to adopt the Langstroth hive. The best authority, the test of time, the certainty of getting hives, etc., readily, the certainty of getting hives, etc., cheaply, and the certainty of having bees and brood in the most salable shape, should they afterwards wish to sell.

Henderson, Ky.



N. W. Ill. and S. W. Wisconsin.

A special meeting of this Association was held at the apiary of Jonathan Stewart, in the village of Rock City, May 16. President R. M. Milken being absent, the meeting was presided over by Vice President Levi Kiester.

After receiving and acting upon the report of the Treasurer, the Association proceeded to discuss a number of very important questions relating to bee-culture. The meeting was unusually interesting, and all the members present exhibited a deep interest in their work, and joined in the discussion of the questions before them with much ability and enthusiasm, and clearly showed careful study and close attention to progressive bee-culture.

The attention of the Association was called to several species of fraudulent practices by some unscrupulous apiarists, whereby an inferior quality of honey is imposed upon the public, and the following condemnatory resolution was passed:

Resolved, That we strongly protest against, and severely condemn, the nefarious practice of feeding bees glucose or grape sugar, or the adulteration of honey in any manner, as dishonorable and dishonest; that we pledge ourselves individually and collectively to expose any person or persons who, to our knowledge, may en-

gage in such fraudulent practices; that no person so engaged shall be admitted to membership in this Association, and that it shall be deemed a sufficient cause for expulsion from membership.

The Association adjourned to meet again at Rockton, Winnebago Co., Ill., Sept 5, 1882.

JONATHAN STEWART, Sec.

The Northwestern Wisconsin Bee-Keepers' Society will meet in LaCrosse, Wis., June 9, 1882, in the City Hall. A good attendance is desired, as arrangements have been made for articles from practical apiarists.

G. J. PAMMEL, Sec.

Local Convention Directory.

1882. Time and Place of Meeting.

May 11—Champlain Valley, at Middlebury, Vt.
T. Brookins, Sec., East Shoreham, Vt.

16—N. W. Ill. and S. W. Wis., at Rock City, Ill.
Jonathan Stewart, Sec., Rock City, Ill.

25—Iowa Central, at Winterset, Iowa.
Henry Wallace, Sec.

June 3—Hart County, Ky., at Woodsonville, Ky.

9—N. W. Wisconsin, at LaCrosse, Wis.
G. J. Pammel, Sec., LaCrosse, Wis.

Sept. 5—N. W. Ill. and S. W. Wis., at Rockton, Ill.
Jonathan Stewart, Sec.

Oct. 5—Kentucky Union, at Shelbyville, Ky.
G. W. Demaree, Sec., Christiansburg, Ky.

Tuscarawas Valley, at Newcomerstown, O.
J. A. Bucklew, Sec., Clarks, O.

In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

SELECTIONS FROM OUR LETTER BOX

A Puzzle.—I have heard of persons running against a pozer, and it seems I have now encountered one, on which I want information. I introduced 6 queens last fall; of course they showed no progeny last fall. Two of the 6 showed their progeny in February, but none of the 4 have laid an egg yet. Of course they were dollar queens, but were well developed and as bright as a dollar. What is the matter?

Industry, Ill.

[We could only guess at an answer, which would be as liable to be incorrect as otherwise.—ED.]

The Journal a Necessity.—I cannot do without the BEE JOURNAL, and if I continue to keep bees, you can depend on me as a life subscriber, at least while you keep so far in advance of all other bee periodicals. My bees are doing well thus far. Some are working in sections, but I have three different kinds of hives, and have to use various sized sections. If the bees pay well this year I shall endeavor to get a uniformity of hives.

HIRAM J. WARD.

Farmington, Kan., May 14, 1882.

Bees in Western New York.—My bees have wintered well on their summer stands packed in chaff, 42 colonies. I have not lost any. The spring weather has been very unfavorable for the bees, and cold winds have prevailed most of the time. The elm and soft maple blossoms have been killed by frost. The early sweet cherry and peach blossoms are opening now, and the dandelion will, in a few days, be at the height of bloom. The orchards have never looked more promising than they do this year, and prospects are very good, if we only get suitable weather. The white clover prospects are not so good, for it has suffered with other grasses greatly from the many changes of weather last winter, with no snow on the ground. The reports from the surrounding country are that colonies have wintered well in cellars and on their summer stands, and are very strong in bees, and wherever there is any loss it is from starvation, and the bee-keeper is entirely to blame for it, for we had splendid weather in the latter part of February to look after the bees and feed them. By the way, I send you a little box with a plant in it. It grows here on the railroad track, and bees work freely on it. Can you give the name of it, and its value for the bees?

WM. BOLLING.

Dunkirk, N. Y., May 10, 1882.

[The plant is the corn gromwell (*Lithospermum arvense*), naturalized from Europe, and widely disseminated in the Northern States, especially occurring on sandy banks and roadsides. Its flowers are very small, but contain a considerable amount of nectar, easily accessible to bees. I should not suppose the quality very good, but have no certain knowledge about this.—L. J. BURRILL, Illinois Industrial Institute.]

Gone to Florida.—I brought here last month from Gretna, La., 5 colonies of bees, and did not lose a half pint in the removal. They are doing splendidly on the saw palmetto at present.

A. T. WILLIAMS.

Tampa, Fla., May 11, 1882.

Unfortunate.—I can sympathize with Mr. R. L. Shoemaker, of Newcomerstown, O., as stated in the last BEE JOURNAL. On April 25, in preparing cages for shipping queens, in drawing a fine tack with the point of a knife, the tack flew into my left eye and destroyed the sight, which has had the effect of subduing my ardor in the bee business somewhat. Weather here is cold and wet. No honey from fruit bloom—too cold and windy. Bees are starving to death; am feeding every colony in my apiary. Outside of the feed, I have given them, I do not think there is one pound of honey in my entire apiary, consisting of 35 colonies. What the future will bring forth remains to be seen. Prospect is far from flattering.

M. H. SNYDER.

Elmwood, Ill., May 12, 1882.

Entomological.—I send by mail a small box containing some wasps and small bees; also, some cocoons of larvæ. The wasps I have noticed for the past 3 or 4 years. I have destroyed many of them—over 200—since yesterday morning. Do you think it necessary? They are easily destroyed while about the hives. The small bees first made their appearance this spring. They seem intent on taking the pollen from the legs of the bees, alighting on their backs. I have seen them carried into the hives in this way. I dug the cocoons of larvæ from the ground where I saw ground bees last summer.

SOLOMON VROOMAN.

Seward, N. Y.

[The wasps are very common everywhere in the Northern United States. They are indeed the most common of our paper-making species. What house-keeper has not been annoyed by them in the autumn and spring, and what child has not been stung by them during the pop-gun period of its existence? They are insect-eating wasps, and so are really our friends. I have never heard of their eating bees, nor do I think they do. I should never kill them. I have seen them destroy the common and very destructive currant slugs in the summer *in extenso*.

The little wild bees are sometimes annoying in the spring, and doubtless take some considerable honey. They do not try to enter the hives after the honey season commences, so far as I have observed. Those who have the Syrian bees will not be troubled much by these wild bees, or any other robbers. The Syrians seem to say practically, to all intruders, "We run this hive." There are two or three species of the bees, sent by Mr. V., all of which are common. They visit the bees and the hives for the honey and the pollen.—A. J. COOK.]

White Clover Prospect Good.—I wintered my 20 colonies on their summer stands as usual, in which manner I have never lost a colony. I commenced the bee business in 1877, have always used the movable frame hive, and have never lost a swarm yet. My bees are now in splendid condition, and only one has a faulty queen. The Syrian queen I wrote of in the BEE JOURNAL, page 374, 1881, and thought was lost, I found in February last when I examined my bees. She was in hive No. 13, about 60 feet distant. The former queen in No. 13 was a weak Italian, and worthless. I thought she might live till spring. I was glad to find her superseded. Bees have bred up very rapidly, the hives being full of brood, and drones flying when it is warm enough. To day the weather is 46°, and a drizzling rain. If it keeps on this kind of weather many

more days I fear the bees will run short of honey. The prospects for white clover is good.

R. M. OSBORN.

Kane, Ill., May 12, 1882.

A "Played-Out" Queen.—I send you by this mail a queen that I have had nearly two years. She has always been a good, fertile queen until about 3 weeks ago, when she commenced laying drone eggs. She would deposit but one egg in a place, in worker cells, but they all hatch out drones. I put on a feeder and fed them; also gave them brood from other colonies, but to no avail. I send her to you to dissect. How do you account for it? She has always been a good layer. My bees were never in better condition at this time of the year than at present, although we have had a very cold, backward spring. L. E. WELCH.

Linden, Mich.

[The queen is undoubtedly old and superannuated, and has become a drone layer. Probably had you given another frame of brood, during a honey flow from fruit, the bees would have reared a young queen, and superseded this one. We have not the necessary time and facilities for scientifically dissecting queens or bees.—Ed.]

Intruders.—Yesterday the bees flew out of one colony much excited, and settled back on the front of the hive. On examining them I found about 3 pints of dead bees, about half inside of the hive and the rest around in front of it. I could not see what caused it. There were a few moths enclosed in their cocoons, not much honey, and plenty of room and bees. When I opened the hive I saw a black bug in the super carrying a dead bee, but would have thought nothing of that under other circumstances, and do not think it caused the trouble. The bug was about as large as a queen bee; head half as large, abdomen a little larger and flat. Tell me what caused my bees to fight and kill each other? JOHN WATSON, JR.

Danville, Ill., May 15, 1882.

[We think a natural or abnormal swarm attempted to invade the hive, and was repelled by the bees belonging there. It may be, however, robbers caused the disturbance, but they would hardly have settled on the front.—Ed.]

Extracted Honey.—We have had many excellent articles on running an apiary for comb honey, by Messrs. Doolittle, Heddon and others, in which all the details of the business have been very carefully and elaborately described. These chapters have been very useful and entertaining; but very little, comparatively, is written on the management of an apiary run exclusively for extracted honey. It would doubtless prove an interesting variety to the readers of the BEE

JOURNAL to have a few chapters on running an apiary exclusively for extracting, with all the minutiae that has been used in describing the best practices for securing comb honey. The best frame and hive to use where extracting is the leading feature of the apiary—in a word, all the *modus operandi*. A few papers on this branch of apiculture would prove a pleasant variety with the comb honey practices, and hair splitting theories, which the readers of bee literature have been so indulged with.

Highlands, N. C. E. E. EWING.

Various Matters.—I would like to ask a few questions: 1. How can I keep the queen out of the section? Mine are coming up in the sections—a few, at least, on nearly all the hives. I give them $\frac{1}{4}$ inch between the sections and brood frames. Found a few sections half full of drone brood. 2. How long can bees, after swarming, live without food? One week ago was nice, and I had several swarms come out; they were hived on foundation, and since then it has been cold, cloudy, and raining so they could not go in search of food. I got uneasy yesterday and went to feeding. 3. When two swarms are hived together, will they usually stay; 4. and would it be best to put on sections on such hives at once? I have two such that fill the lower story of the Langstroth hive altogether too full of bees. We have had a week of remarkable weather for May; people were wearing overcoats all the week.

D. W. BELLEMEY.

Vienna, Ill., May 14, 1882.

[1. Extract all the honey from the brood chamber, and use only worker foundation in the boxes.

2. They should be fed within 24 hours after swarming, if weather is unfavorable for gathering honey.

3. Yes, if one queen is removed.

4. No, not until the foundation is well drawn out below.—Ed.]

Convention at Grand Rapids, Mich.

—What became of the Bee Convention to be held at Grand Rapids April 26, 27? I was there but could not find any meeting of bee-keepers; neither have I seen any report of it published. B. DICKINSON.

[We do not know; perhaps the Secretary, Mr. W. M. S. Dodge, Coopersville, Mich., can give some satisfactory explanation. It was to have been held in Supervisors' Hall.—Ed.]

Bad on the Pets.—We lost near all the apple and peach bloom by the blizzard; now we lose nearly all the locust and poplar or tulip by the continual rains of the past 10 or 12 days, bees hardly gathering enough for brood-rearing. To-night is almost cold enough for frost. If it was not for the cheering news brought by the BEE JOURNAL, I would feel very despondent; indeed, I have divided

several colonies which were making preparations for swarming, and had one large swarm from a box hive which I bought from a neighbor. A great many of my neighbors' swarms are leaving them this season. I live in hopes for the white clover.

G. W. ASHBY.
Valley Station, Ky., May 12, 1882.

Floating Apiaries.—Please state in the BEE JOURNAL whether there is any man or company of men who have steamboats loaded with colonies of bees, and advance up the river as the weather gets warmer; if so, please give particulars. WM. SEARS.

Harrodsburg, Ind.

[Not that we are aware of; several have tried it, chief among whom was Mr. C. O. Perrine, of this city; but we believe the experiment has met with disappointment and loss in each instance.—ED.]

Milkweed.—I mail you a few bees that were handed me by a party who lives some 12 miles south of this. By examining, you will see the bees are in such condition they cannot use their feet, from the particles adhering to them; they cannot crawl in the gum. He says at the entrance of one old box hive there were about a quart of bees dead, all with these particles attached to their feet. I had a swarm of bees to-day that I obtained, to my certain knowledge, 4 queens from. I caught one as she came from the hive, which I caged, then moved the old hive and put a new one on the old stand laying the queen caged at the entrance, supposing they would come back. They went off 50 steps and settled. I took the caged queen and hive to where they settled; shook them off with the queen still caged. They commenced going in, when I discovered another queen; caught and caged her; took the first queen and put her in the hive she came out of, turned her loose in the old hive, and moved it back to its former place; went to the swarm, found them settling, where first settled; shook them off, and waited to see if they were going in, when I discovered queen No. 3. Caught and caged her, put No. 2 inside of the hive in the cage on a frame, and was watching to see if they were going in, when I discovered queen No. 4. Being out of cages, I gave her to my wife to hold, who, being timid, let her get away. She flew in the air. Whether I caught this one again I cannot say, but I got 4 queens that I know.

McKinney, Texas. SUBSCRIBER.

[In most of the United States there is a species of milkweed (*Asclepias*), the sap or juice of which adheres to the feet and legs of the bees, and not only causes them much trouble to walk, but is very distasteful to those in the hive. It is not an unusual occurrence for the hive bees to kill great numbers of them. Perhaps this

milkweed grows in your neighborhood, or some other plant of a like nature, the pollen or sap of which is the cause of the trouble.—ED.]

Snow and Frost.—This morning the mercury stood at freezing, and the ground was frozen. Yesterday we had a snow storm, and the snow has not all disappeared yet. Several days past have been quite cold, but to-day is pleasant. GEO. H. GOODWIN.
West Milton, N. H., May 17, 1882.

THE AMERICAN BEE JOURNAL

ADVERTISING RATES.

20c. per agate line of space, each insertion.

A line of Agate type will contain about **eight words**; fourteen lines will occupy 1 inch of space. Transient Advertisements payable in advance. Special Notices, 50 cents per line.

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THOMAS G. NEWMAN,
325 West Madison Street., Chicago, Ill.

Special Notices.

The BEE JOURNAL is mailed at the Chicago Postoffice every Tuesday, and any irregularity in its arrival is due to the postal employees, or some cause beyond our control.

We will send Cook's Manual in cloth, or an Apiary Register for 100 colonies, and Weekly BEE JOURNAL for one year, for \$3.00; or with King's Text-Book, in cloth, for \$2.75; or with Bees and Honey, in cloth, \$2.50.

Always forward us money either by postal order, registered letter, or by draft on Chicago or New York. Drafts on other cities, or local checks, are not taken by the banks in this city except at a discount of 25 cents, to pay expense of collecting them.

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All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages).....\$1 00
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The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones to procure at the start.

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to new Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, \$4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

Binders for 1882.—We have had a lot of Emerson binders made especially for the BEE JOURNAL for 1882. They are lettered in gold on the back, and make a nice and convenient way to preserve the JOURNAL as fast as received. They will be sent post paid by mail for 75 cents.

Premiums.—Those who get up clubs for the Weekly BEE JOURNAL for 1882, will be entitled to the following premiums. Their own subscription may count in the club:

For a Club of 2,—a copy of "Bees and Honey."
" 3,—an Emerson Binder for 1882.
" 4,—Apiary Register for 50 Colonies, or Cook's (Bee) Manual, paper, cloth.
" 5,—
" 6,—Weekly Bee Journal for 1 year, or Apiary Register for 200 Col's.

Or they may deduct 10 per cent in cash for their labor in getting up the club.

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL.
Monday, 10 a. m., May 22, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.**CHICAGO.**

HONEY—As the season is well advanced, sales of extracted honey are slow and prices remain unchanged. I am paying 7c. for dark and 9c. for light, cash on arrival. Good comb honey is scarce and rules high.

BEESWAX—I am paying 24c. for good yellow wax, on arrival; 18@22c. for medium grade, and 15@17c. for dark.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—The demand for extracted honey, in the retail way, is fair, and our sales for manufacturing purposes were very good of late. We pay 7@9c. on arrival. Prices for comb honey nominal and demand slow.

BEESWAX—Brings 18@22c. The demand exceeds the offerings.

C. F. MUTH.

Quotations of Commission Merchants.**CHICAGO.**

HONEY—The demand for honey is light, most of the trade finding fault with the best offered, as it is more or less candied. Values are not steady, prices being made to meet the views of the purchaser.

BEESWAX—Scarce, and in demand at 23@25c.

R. A. BURNETT, 165 South Water St.

BOSTON.

HONEY—Trade quiet. We quote at 20@22c., according to quality.

BEESWAX—Prime quality, 25c.

CROCKER & BLAKE, 57 Chatham Street.

CLEVELAND.

HONEY—There are a good many small lots of very nice white section honey coming in now from time to time. White sells readily at 22c.; second quality 18@20c. Buckwheat, no sale at any price. Extracted, none in market.

BEESWAX—25@30c.

A. C. KENDEL, 115 Ontario Street.

NEW YORK.

HONEY—Little if anything doing in honey, and prices are entirely nominal. White clover, fancy, 1 lb. bxs., 15@16c.; white clover, good to choice, 1@2 lb. bxs., 13@14c.; buckwheat, 2 lbs., per lb., 11@12c. Extracted and strained, white, 9@10c.; dark 7@8c.

BEESWAX—There is only a moderate supply of beeswax, and with a fair inquiry prices are firmly sustained. Western, pure, 24@25c.; Southern pure, 23@24c.

D. W. QUINBY, 105 Park Place

ST. LOUIS.

HONEY—In fair demand. Strained selling at 8@10c.; comb scarce—nominal at 18@22c.

BEESWAX—Stiff at 21@22c. for prime.

R. C. GREEK & Co., 117 N. Main Street.

SAN FRANCISCO.

HONEY—Stocks are not heavy, but are larger than holders care to have them. Offerings are almost entirely second grade to inferior. There is a general desire to clean up prior to arrival of new crop.

We quote white comb, 13@14c.; dark to good, 8@11c. Extracted, choice to extra white, 7@7½c.; dark and candied, 6@6½c. **BEESWAX**—23@25c.

STEARNS & SMITH, 425 Front Street.

We learn, with much regret, that Mr. James Vick, of Rochester, N. Y., died of pneumonia on the 9th inst. Mr. Vick was a prominent and popular seedsman, and editor and publisher of a "Monthly" which was the admiration of every lover of the beautiful in nature. He was a thoroughly progressive and practical man, and one well-known throughout the World.

When changing a postoffice address, mention the *old* as well as the new address.

CLUBBING LIST.

We supply the Weekly **American Bee Journal** and any of the following periodicals, one year, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage is prepaid by the publishers.

	Publishers' Price.	Club.
The Weekly Bee Journal,	\$2 00..	
and Gleanings in Bee-Culture (A. J. Root) 3 00..	2 75	
Bee-Keepers' Magazine (A. J. King) 3 00..	2 60	
Bee-Keepers' Instructor (W. Thomas) 2 50..	2 35	
The 4 above-named papers,	4 50..	4 00
Bee-Keepers' Exchange (Houk & Peet) 3 00..	2 80	
Bee-Keepers' Guide (A. G. Hill) 2 50..	2 35	
Kansas Bee-Keeper,	2 60..	2 40
The 7 above-named papers,	6 30..	5 50
The Weekly Bee Journal one year and Prof. Cook's Manual (bound in cloth) 3 25..	3 00	
Bees and Honey, (T. G. Newman) 2 75..	2 60	
Binder for Weekly, 1881,	2 85..	2 75
Binder for Weekly for 1882,	2 75..	2 60

Preparation of Honey for the Market, including the production and care of both comb and extracted honey. A new pamphlet of 32 pages. At the last meeting of the North American Bee-Keepers' Society, we were appointed on a committee to prepare instructions on the Exhibition of Bees and Honey at Fairs; this is also added to the above. Price, 10 cents.

We have on our desk Circulars and Price Lists of bees and apiarian supplies from G. J. Pammel, La Crosse, Wis., L. E. Mercer, Lennox, Iowa, and W. G. Russell, Millbrook, Ontario, Canada.

Those who may wish to change from other editions to the Weekly, can do so by paying the difference.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or \$8 per 100.

Articles for publication must be written on a separate piece of paper from items of business.

Advertisements intended for the **BEE JOURNAL** must reach this office by Saturday of the previous week.

Constitutions and By-Laws for local Associations \$2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

This one fact is being brought before the minds of the people of the United States: Kendall's Spavin Cure is not excelled as a liniment. 18w4t

Bingham's Smoker Corner.

Bayou Goula, La., May 2, 1882.
Messrs. BINGHAM & HETHERINGTON, Abbeville, Mich.

Dear Sirs: The Conqueror conquers everything in the apiary. It is almost a fight between my three assistants, as to who will get it first in the morning. A single puff from it will fill a double story with smoke. I will use no other after this.

Yours truly,

P. L. VIALON.

FLAT-BOTTOM COMB FOUNDATION.

high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

J. VAN DEUSEN & SONS,
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I can sell the above Smokers at MANUFACTURERS' PRICES, by mail or express, at wholesale or retail. All the latest improvements, including the CONQUEROR.

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Via Grand Trunk R. R. and St. Lawrence River Steamers, through the THOUSAND ISLANDS and FAMOUS RAPIDS, to MONTREAL, WHITE MOUNTAINS, and SEA SHORE at PORTLAND, ME., near Boston; thence back to Detroit, via Quebec, Niagara Falls and Buffalo, will leave Detroit July 5, 20 & 27.

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For Bee Journal of 1882,

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PURE ITALIAN QUEENS—Bred from selected tested Queens; also, Chaff and Simplicity Bee Hives, all kinds of Sections, Wide Langstroth frames, and all kinds of Apiarian Supplies. Send for Price List. A. B. MILLER & SON, Waukegan, Elkhart County, Ind. 21am4t

ELECTROTYPES

Of Engravings used in the Bee Journal for sale at 25 cents per square inch—no single cut sold for less than 50c.

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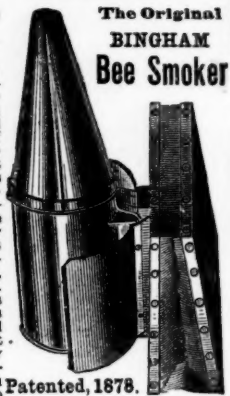
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